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GUJARAY, KARABI				
ART UNIT		PAPER NUMBER		
2879				

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/045,663

Applicant(s)

HWANG ET AL.

Examiner

Karabi Guharay

Art Unit

2879

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

P riod for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 16 January 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 01/02.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

Priority

Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Preliminary Amendment, filed on 16 January 2002, has been entered.

Specification

The disclosure is objected to because of the following informalities: On page 14, line 13 of specification, SVM coil is designated by # 16, while Fig 1 and its description indicated # 22 as the SVM coil. Thus, appropriate correction is required.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-20 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In this case, claim 1 and claim 18 recite "one of the grid electrodes including plurality of focusing electrodes", here there is a disagreement in numbers because how one electrode could be plurality of electrodes at the same time, thus it is illogical.

Claims 2-17, & 19-20 are rejected being dependent on rejected base claims.

However, in the light of specification, it is understood that applicant means one of the grid electrode includes plurality of sub-electrodes.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-3, 5-6, 9, 11-20 are rejected under 35 U.S.C. 102(e) as being anticipated by Taguchi et al. (US 6617777).

Regarding claim 1, Taguchi et al. disclose an electron gun (see Fig 4) for a cathode ray tube comprising a cathode (7) for emitting an electron beam, a plurality of grid electrodes G1, G2, G3, G4, & G5 aligned sequentially from the cathode (lines 36-42 of column 3), one of the grid electrode G4 (10) have a plurality of tubular focusing electrode sections (13, 14) that are mounted with at least one predetermined gap therebetween, a support (support rod 18 of Fig 1) for fixing the grid electrodes in their aligned arrangement, and a shield electrode (coil member 12) mounted covering the at least one gap of the focusing electrodes (13, 14) and extending a predetermined distance over the focusing electrodes (13, 14, lines 52-55 of column 3, lines 52-56 of column 4).

Regarding claim 2, Taguchi et al. disclose that a plurality of openings are formed at predetermined distances through the shield electrode (lines 32-33 of column 5), and

the shield electrode 12 is cylindrical and is mounted on the focusing electrodes (13, 14) covering the gap (see Fig 1).

Regarding claim 3, Taguchi et al. disclose that the shield electrode 12 is a single unit (see Fig 1).

Regarding claim 5, Taguchi et al. disclose that the at least one gap g_1 of the focusing electrodes satisfies the following condition $4\text{mm} < g_1 < 12\text{mm}$ (lines 30-32 of column 5).

Regarding claim 6, Taguchi et al. disclose that the length of the first separated focusing electrode 13 has an axial length (b), which is greater than the inner radius (0.5a mm), clearly shown in Fig 1.

Regarding claim 9, Taguchi et al. disclose that the distances g_2 between the openings satisfy the condition $0.3\text{ mm} < g_2 < 0.75\text{ mm}$ (in this case separation distance between openings are the diameter of the metal wire, which is 0.6mm, see line 30 of column 5).

Regarding claim 11, Taguchi et al. disclose that the shield electrode 12 is made of a non-magnetic material such as stainless steel (see line 30 of column 5).

Regarding claim 12, Taguchi et al. disclose that the openings are circular (see Fig 1).

Regarding claim 13, Taguchi et al. disclose that the openings are multilateral (since openings are cylindrical space between windings).

Regarding claim 14, Taguchi et al. disclose that the shield electrode 12 directly contacts the focusing electrode (13, 14 see Fig 1).

Regarding claims 15 & 16, Taguchi et al. disclose that the shield electrode 12 is provided at a predetermined distance from focusing electrodes by being fixedly mounted to the support (16, 17) through pottrussions (tip part 15) formed integrally to the shield electrode (lines 10-19 of column 4).

Regarding claim 17, Taguchi et al. disclose that cathode emits a single electron beam (line 27-29 of column 5).

Regarding claim 18, Taguchi et al. disclose a cathode ray tube (Fig 3) comprising an electron gun 4, including a cathode (7) for emitting an electron beam, a plurality of grid electrodes G1, G2, G3, G4, & G5 aligned sequentially from the cathode (lines 36-42 of column 3), one of the grid electrode G4 (10) have a plurality of tubular focusing electrode sections (13, 14) that are mounted with at least one predetermined gap therebetween, a support (support rod 18 of Fig 1) for fixing the grid electrodes in their aligned arrangement, and a shield electrode (coil member 12) mounted covering the at least one gap of the focusing electrodes (13, 14) and extending a predetermined distance over the focusing electrodes (13, 14, lines 52-55 of column 3, lines 52-56 of column 4), a neck 3 within which the electron gun is mounted, and a scanning velocity modulation coil (shown in Fig 6) mounted on an outer circumference of the neck corresponding to the positioning of the at least one gap of the focusing electrodes (lines 20-23 of column 5).

Claim 19 recites essentially the same limitations of claim 2. Thus claim 19 is rejected as claim 2 (see rejection of claim 2).

Regarding claim 20, Taguchi et al. disclose that the CRT is a projection-type cathode ray tube, in which a single electron beam is emitted from the cathode (line 26-28 of column 5).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Taguchi et al., as applied to claim 1.

Regarding claim 4, Taguchi et al. meet all the limitations of claim 4, except for shield electrode formed by a plurality of separate elements. Taguchi et al. teach a shield electrode 12, which is a coil, formed of a single metal wire. However, It is noted that applicant's specific formation of shield electrode by a plurality of separate elements does not solve any of the stated problems or yield any unexpected result that is not within the scope of the teachings applied. Therefore it is considered to be a matter of choice, which a person of ordinary skill in the art would have found obvious to use plurality of separate elements to make the shield electrode.

Allowable Subject Matter

Claims 7-8,10 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, second paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter:

The prior art of record neither shows nor suggests a shield electrode, which satisfy either the condition of claim 7 or claim 8, or having openings as claimed in claim 10.

Other Prior Art Cited

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure : Kamohara (US 4686420); Odenthal (US 5077498); JP 2003031154 A.


Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Karabi Guharay whose telephone number is (703) 305-1971. The examiner can normally be reached on Monday-Friday 8:30 am - 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nimeshkumar D. Patel can be reached on (703) 305-4794. The fax phone number for the organization is (703) 308-7382.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

K.G.
Karabi Guharay
Patent Examiner
Art Unit 2879


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